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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,848	10/27/2003	Michel Laberge	C525 0346 GNM/TAR/bds	9279
720	7590	10/05/2004	EXAMINER	
OYEN, WIGGS, GREEN & MUTALA			KIANNI, KAVEH C	
480 - THE STATION			ART UNIT	
601 WEST CORDOVA STREET			2883	
VANCOUVER, BC V6B 1G1			PAPER NUMBER	
CANADA			DATE MAILED: 10/05/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/692,848

Applicant(s)

LABERGE ET AL.

Examiner

K. Cyrus Kianni

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2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) 35-67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-34 is/are objected to.
- 8) ☐ Claim(s) 35-67 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- Applicant's election without traverse of claims 1-34 in a telephone conversation on 9/16/2004 is acknowledged.

1. This application contains claims directed to the following patentably distinct species of the claimed invention: Invention I, claims 1-34 are directed to an optical switching system having encoders positioned, relative to the associated output optical channel and the first pattern projector, to receive the one or more first control signal radiation patterns; invention II, claims 35-37 are directed to an optical switching system having radiation sensors located to generate a control signal indicative of an intensity of radiation of the first and second radiation patterns which has interacted with the associated reticle; invention III, claims 48-67 are directed to optical switching system that determines the position of the selected moveable output optical element using first control signal radiation. Each of the above inventions requires a different search than the other inventions.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, none of the above inventions are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim

is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Mr. C. Crowford, representing Mr. Manning, on 9/07/04 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-34. Affirmation of this election must be made by applicant in replying to this Office action. Claims 35-67 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

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remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

4.

Allowable Subject Matter

5. Claims 2-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2-34 are allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious wherein each output encoder comprises an associated output reticle, each output reticle having a spatially varying pattern of interaction with radiation incident thereon in combination with the rest of the limitations of the base claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order

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for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (US 6133986).

Regarding claim 1, Johnson teaches an optical switch comprising:

a first pattern projector configured to project one or more first control signal radiation patterns (see fig. 36, item s1 and 2; see col. 21, last parag.-col. 22, line 12; wherein the lens aperture(s) along with reflector(s) are used as beam pattern projector(s) shown in fig. 26,29 corresponding to fig. 21a-b as means for generating control/feedback signal for element(s) position alignment, also see col. 15, lines 19-65+);

a plurality of output optical channels (see col. 23, lines 21-28; wherein the optical channels are in accordance with applicant's optical channels specified in the specification parag. 0169);

a plurality of output encoders (see at least col. 23, lines 21-27), each output encoder associated with one of the plurality of output optical channels (see at least col. 23, lines 21-27),

each output encoder positioned, relative to the associated output optical channel and the first pattern projector, to receive the one or more first control signal radiation patterns and to detect at least a portion of one or more corresponding output Moir interference patterns produced by the one or more first control signal radiation patterns (see col. 20, line 61-col. 21, line 35+);

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wherein each output encoder is configured to generate a corresponding output control signal indicative of an intensity of detected output Moir interference patterns (see fig. 24, varying pattern intensities and col. 21, lines 1-54, see specifically lines 41-54).

However, regarding the above preamble, Johnson does not specifically teach wherein the above optical switch is a cross-connect switch for switching optical communications signals. Nevertheless, Johnson states that the transmitted signal can be switched between different optical elements/regions (see col. 22, lines 15-26 and col. 18, lines 49-58) and wherein such signal is switched between source and optical receiver elements such as that shown in fig. 36. Thus, it would have been obvious to a person of ordinary skill in the art when the invention was made to use Johnson's optical switch system as means for cross-connect switch for optical communications since such system would provide high resolution image reading/scanning, printing, optical storage media, microlithography, and/or as a photographic reproduction unit (see col. 1, lines 13-27).

Citation of Relevant Prior Art

8. Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In accordance with MPEP 707.05 the following references are pertinent in rejection of this application since they provide substantially the same information disclosure as this patent does. These references are:

Veale 4429267

Kobrin 6087655

Stevens 4333009

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These references are cited herein to show the relevance of the apparatus/methods taught within these references as prior art.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Cyrus Kianni whose telephone number is (571) 272-2417.

The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 6:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font, can be reached at (571) 272-2415.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9306 (for formal communications intended for entry)

or:

Hand delivered responses should be brought to Crystal Plaza 4, 2021 South Clark Place, Arlington, VA., Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956.



K. Cyrus Kianni
Patent Examiner
Group Art Unit 2883

September 27, 2004